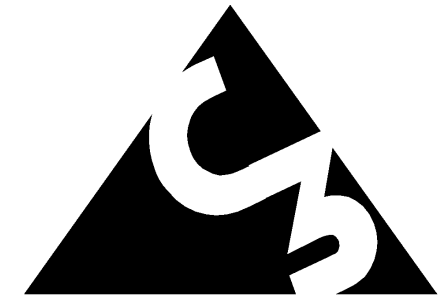


Environmental Management Systems (EMS), ISO 14001 and Clean Corporate Citizens



**CLEAN CORPORATE CITIZEN
PROGRAM**

Kelie Bond & Valerie Haan

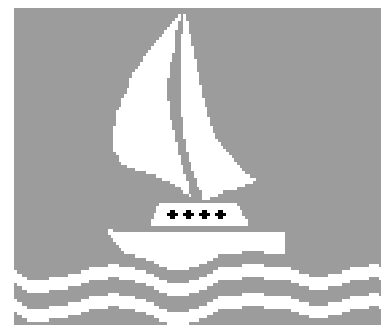
**Michigan Department of
Environmental Quality**

1-800-662-9278

EMS

"A system put into place that keeps things
running smoothly"

Denso Manufacturing Michigan, Inc.



“Environmental” is no longer a department - its the way we operate

- Contractor rules include environmental clauses which require the contractor to present any issues, spills, or problems to the executive management team - in person
 - Denso Manufacturing Michigan Inc.

Here's Where to Find EMS Help

- Michigan DEQ

http://www.michigan.gov/deq/0,1607,7-135-3307_3668_4149---,00.html

- USEPA

<http://mng-unix1.marasconewton.com/opei/ems/index.htm>

The Bottom Line of the EMS

- The biggest expenses are typically internal labor, consulting and ISO registration fees
- Average industry pay-back for EMS "up front" costs is 18 months
- Typically the value of ISO registration outweighs the costs as the plant continues to find new ways to save money
- The EMS makes it easier to train employees, monitor impacts and measure results
- Positive press is good for the public image, and can help improve business

EMS tips from those in the know

"Cheapest, and Easiest" is all in the design

- Keep the EMS simple
- Keep documentation up to date and accessible
- Define all terms and communicate the info:
 - "significant"
 - "depth of calibration"
 - continuous vs continual
 - records vs documentation - what's the difference?
- Organize a "snapshot" for the auditor's visit
- Know that audits are intense

Keeping Audit Costs Down

- The facility must make sure they are audited against the ISO standard and not against an artificial "norm"
- Know the auditor's background (chemistry, safety)
- Approximately 1/3 of the audit time should be spent questioning and debating points with the auditor
- Most nonconformances are in Training (4.4.2) and Documentation Control (4.4.5)
- Consultants who design your EMS may not be available when the auditor shows up - Anticipate and plan for this
- "No findings" does not mean perfection
- Don't be afraid of "majors", they are windows for improvement

More on audits . . .

- Avoid "auditor magnets"
 - blank spaces on forms
 - the words "periodically, all, must, always, never", and the phrase "We've always done it this way."
- Be careful not to box yourself in to a corner - for example if you say, "Procedures must be signed", and a procedure is initialed - its a non-conformance
- Interview several (10+) auditors and select one that matches with your corporate philosophy



**CLEAN CORPORATE CITIZEN
PROGRAM**

**TAKE YOUR EXCELLENCE TO THE
ULTIMATE**

**JOIN MICHIGAN'S COMMUNITY OF ELITE
ENVIRONMENTAL PERFORMERS**



Michigan's Clean Corporate Citizen Criteria

- **Pollution Prevention Program (P2)**
 - implemented and effective

- **Environmental Compliance**
 - applicable State and Federal regulations

- **Environmental Management System**
 - in place and integrated

C3's Have Reported Results . . .

Mark IV Automotive - Big Rapids

- Reduced land filled corrugated cardboard from 21 tons per month to 3.42 tons per month
- Reduced water usage by 9,000 gallons per day in 1 year
- Eliminated VOC's from the facility in 1 year
- Reduced wastewater discharge from 30,000 gallons/day to 4,500 gallons/day
- Received ISO 14001 in 1998; C3 in 2000 and Ferris State University P2 award in 2001

More results. . .

Delphi E & C Grand Rapids Plant

- 27% waste reduction (increased recycling) and 6.1% energy use reduction (looking for ways to conserve) in 2001
- Have tracked savings \$38,823 since 1999 through minor continual improvement efforts
- Experienced significant reductions in generation of CO₂, SO₂, NO_x and CO
- Hosted a one-day open house with over 800 community members in attendance

And even more. . .

- GM Powertrain - Livonia Engine Plant
 - Eliminated all USTs and went from large to small quantity generator
- March Coatings Plants 1 & 2 - Brighton
 - Achieved zero waste sent to landfills
 - Eliminated all heavy metals and hazardous air pollutants
- Unified Industries - Howell facility
 - Eliminated NPDES permit through waste stream reduction
- Baker Furniture - Grand Rapids
 - Purchased new software to track chemical usage
- DeWitt Barrels - Grand Rapids
 - Trains all suppliers, vendors and contractors on EMS and P2
- Ford EMDO - Allen Park
 - Installed automatic temperature controls for buildings which adjust for occupied/unoccupied conditions leading to energy savings
 - Initiated procedures for contaminated mail and anthrax exposure
 - Initiated legionella bacteria controls in the water system

QUESTIONS?

Michigan Department of
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Assistance Center
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Web Site:
www.michigan.gov/deq

- Valerie Haan (517-241-0231)
haanv@michigan.gov
- Kelie Bond (517-241-7969)
bondk@michigan.gov

